



GROUTED CONNECTIONS FOR OFFSHORE WIND AND O&G

Foundation type / situation	Type of connection shown	Typical offshore project
1/ Life extension – structural strengthening	1a/ Grouting of jacket members to extend life of existing assets 1b/ Pile / sleeve grouted connection	Offshore wind turbine foundations Offshore substation foundations Oil and gas platforms
2/ Monopile – Transition piece grouting / drilled and grouted Monopile	2a/ Structural grouted connection between Monopile and Transition piece for load transfer 2a/ Bolted connection with grouted skirt backfill for corrosion protection 2b/ Structural grouted connection between a drilled socket (seabed) and monopile	Offshore wind turbine foundations Offshore substation foundations
3/ Suction bucket	Void filling post installation of suction bucket foundations using low strength grout	Offshore wind turbine foundations Offshore substation foundations Oil and gas platforms
4/ Jacket leg – pin pile grouting	Structural grouted connection between pin piles and jacket legs	Offshore wind turbine foundations Offshore substation foundations Oil and gas platforms
5/ Pile anchor	Drilled socket grouting	Offshore wind turbine foundations